

lose as the consequence of the growth of the reseller segment. Greater risks of losing retail customers through "cannibalization" reduce the benefits of selling wholesale capacity to resellers.

**B. MCI WORLDCOM FACES STRONG INCENTIVES TO PROVIDE WHOLESALE SERVICE**

**1. MCI WorldCom faces limited risk to its customer base from providing wholesale capacity**

56. As mentioned above, firms with larger shares of retail customers would be expected to be at greatest risk of losing customers to resellers. Thus, MCI, which accounts for roughly 15 percent of presubscribed lines (and 20 percent of long distance revenue) would be expected to face significantly lower risk of losing retail customers than AT&T.<sup>34</sup>

57. Trends in the long distance revenue shares of resellers, AT&T, MCI and others suggest that growth by WorldCom and resellers has come largely at the expense of AT&T. While these aggregate trends data mask customer churn faced by all suppliers, they strongly suggest that the growth of resellers has come at the expense of AT&T, not MCI. As shown in Figure 1, FCC data indicate that between the first quarter of 1992 and the third quarter of 1997, the most recent available data, AT&T's share of long distance revenue fell by 12.9 percentage points. Over the same period, the share accounted for by WorldCom and others increased by 12.2 percentage points. MCI's share grew by less than one percentage point and Sprint's share was unchanged.

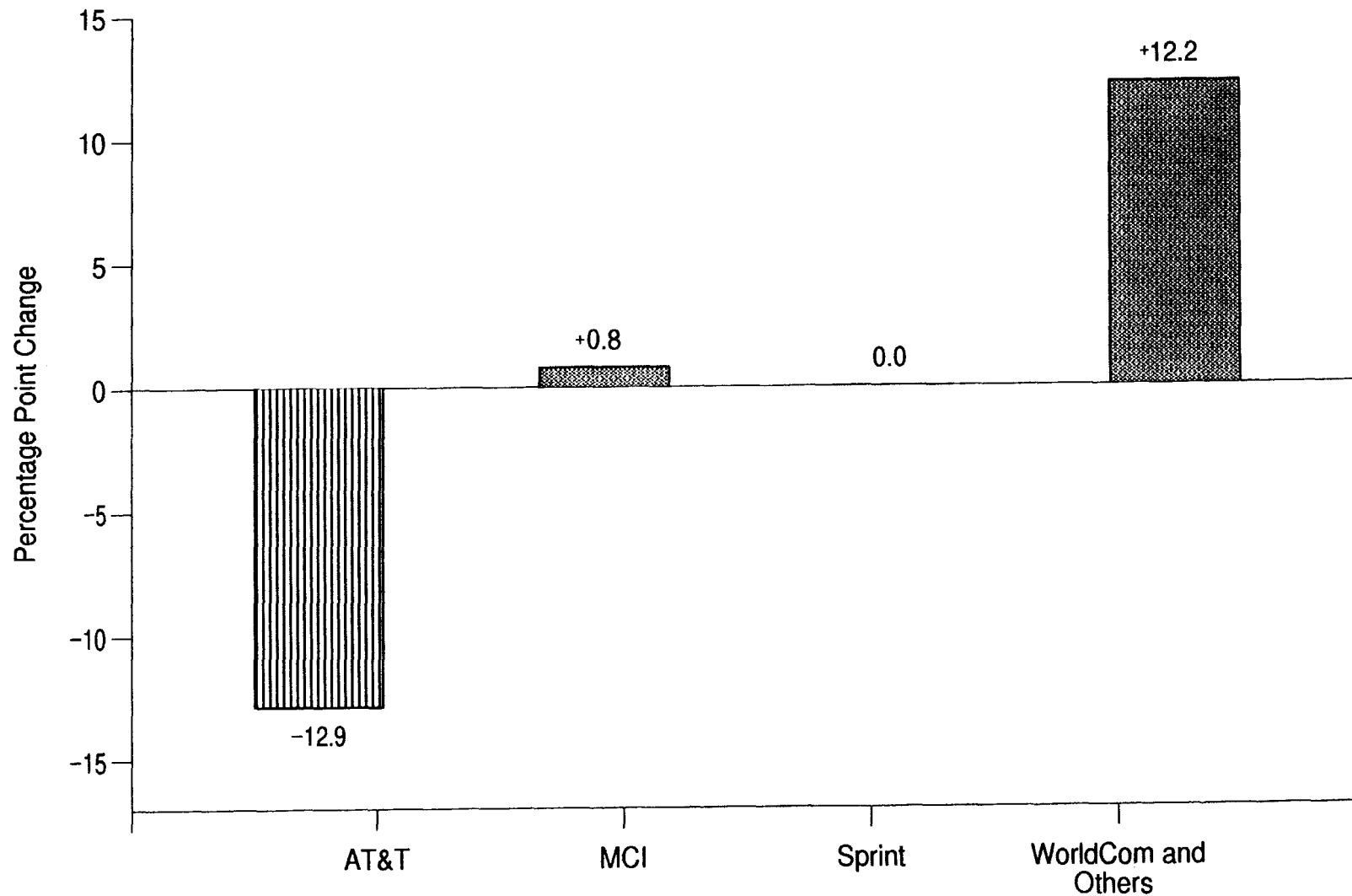
58. These data suggest that the probability that a reseller wins a customer from MCI is likely to be well below the 15 percent level implied by MCI's share of presubscribed lines. To the extent that wholesale sales create relatively little risk of losing customers to

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34. FCC, Trends in Telephone Service, February 1998, p. 49, 52.

Figure 1

**Percentage Point Change in Long Distance Revenues Shares  
1992Q1 to 1997Q3**



Note: Based on total toll revenues for Long Distance Carriers only.

Source: Long Distance Market Shares, Third Quarter 1997, Table 3.4.

resellers, MCI WorldCom would have little incentive to restrict wholesale sales.<sup>35</sup>

59. GTE's experience in entering the provision of long distance service as a reseller also suggests that resellers' gains have disproportionately come at the expense of AT&T.<sup>36</sup> This, in turn, implies that gains from other suppliers have been disproportionately low. Similarly, MCI's "10-321" dial-around service draws a disproportionate number of users from AT&T.<sup>37</sup> According to an MCI executive, "[o]ur research shows us that more than 80 percent of 10-321 users subscribe to AT&T."<sup>38</sup>

## **2. The availability of alternative suppliers gives MCI WorldCom little incentive to restrict wholesale capacity**

60. As noted above, the incentives of a vertically integrated supplier of retail long distance service to sell wholesale capacity depends on the availability of alternative sources of wholesale capacity. If such capacity is readily available from other suppliers, then a firm that chooses not to sell wholesale capacity imposes costs on itself without the benefit of protecting its retail customer base.

61. A wide variety of firms, including existing suppliers and entrants, provide wholesale capacity. These include the major long distance networks; so-called second-tier suppliers such as LCI, Cable and Wireless, and Frontier; regional networks such as Interstate FiberNet, McLeod USA, CFN Fibernet, Norlight, KinNet, Minnesota Equal Access Network; as

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35. Exhibit 14 to the affidavit by Prof. Schmalensee and Dr. Taylor presents an example intended to demonstrate that the sale of wholesale capacity by a firm with a 14 percent share would not be profitable. It is interesting to note that maintaining the other assumptions in this example, the sale of wholesale capacity becomes profitable if 10 percent or less of the reseller's customers come from the vertically integrated supplier.

36. New York Times, April 13, 1997, Section 3, p. 1.

37. "Dial-around" is a type of interexchange service in which callers connect to a carrier's network by dialing an access code. Like more traditional resale, provision of wholesale capacity for "dial-around" services raises risks of "cannibalization."

38. Advertising Age, November 10, 1997, p. 47.

well as entrants such as Qwest, IXC, Williams, Level 3 and firms purchasing dark fiber from entrants. The availability of these alternative sources of wholesale supply increases the incentive of integrated network operators to provide wholesale capacity to resellers.

**C. MAJOR LONG DISTANCE NETWORKS ARE SIGNIFICANT PROVIDERS OF WHOLESALE CAPACITY**

62. The discussion above suggests major network operators have significant incentives to provide wholesale capacity and will continue to face these incentives after the merger. This is due to the availability of competing sources of wholesale capacity and limited risks that resellers will displace their retail customers (at least for firms other than AT&T). The recent wholesale marketing efforts of major network providers are consistent with this view.

**1. Recent wholesale activity of major network operators**

63. The behavior of AT&T, Sprint, and MCI today shows that integrated network providers face strong incentives to provide wholesale services. For example, in conjunction with applications to provide within-region long distance services under Section 271 of the Telecommunications Act of 1996 and in anticipation of having these applications approved, several Regional Bell Operating companies entered into contracts for the provision of wholesale capacity. Despite the fact that, once approved, RBOCs are likely to compete vigorously with the major network operators, AT&T and Sprint have succeeded in obtaining wholesale supply contracts in competition with WorldCom. In other words, contrary to the claim of GTE's economists, the major integrated networks have not been dissuaded from providing significant wholesale capacity to resellers.

64. The Yankee Group has reported the following results of contract awards (as of December 1997):<sup>39</sup>

- Bell Atlantic/NYNEX awarded wholesale contracts covering out-of-region service in 34 states to Sprint;
- Bell South awarded wholesale contracts covering 39 states to AT&T;
- SBC/Pactel awarded wholesale contracts covering five states to Sprint;
- U.S. West has announced wholesale contracts with Williams to provide data and voice services and with Qwest to provide data services.<sup>40</sup>
- Ameritech awarded a contract for 45 states to WorldCom;

65. As mentioned above, MCI in recent months introduced its 10-321 dial-around service through its Telecom USA subsidiary. This service has been heavily promoted by MCI and has experienced rapid growth.<sup>41</sup> This action indicates that "cannibalization" concerns did not prevent MCI from providing service that compete with its retail offerings.

## **2. AT&T's role in the provision of wholesale service**

66. Prof. Harris is incorrect in claiming that AT&T is not a significant participant in providing wholesale capacity and in claiming that the proposed transaction "reduces effective supply for resellers from three carriers to two."<sup>42</sup> His claim is contradicted by AT&T recent large-scale contract with Bell South described above and by available industry data.

67. In mid-1997, Atlantic-ACM reported estimates of AT&T's role in the wholesale

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39. Yankee Group, Telecommunications White Paper, vol 12, no. 12, December 1997 (for information on all companies except U.S. West).

40. U.S. West press releases, January 5, 1998 <<http://www.uswest.com/com/insideusw/new/010598.html>>; February 21, 1998 <<http://www.uswest.com/com/insideusw/new/021798a.html>>.

41. Advertising Age, February 2, 1998, p. 52.

42. Harris LD affidavit, p. 28.

marketplace in a 1997 report.<sup>43</sup> This survey reports AT&T's revenue-weighted share for (i) private line (e.g., transport-only) services; and (ii) switched services, which is sold to switchless resellers. With respect to the provision of switched services, the Atlantic-ACM data indicate that AT&T is among a large number of wholesale suppliers. These figures indicate that firms other than AT&T, Sprint, MCI and WorldCom account for nearly 40 percent of such sales and are consistent with the analysis reported above indicating that a variety of firms other than AT&T, Sprint, MCI and WorldCom provide significant wholesale services to resellers.

68. These data also indicate that AT&T accounted for 38 percent of private line sales. We understand that much of private line services are purchased by facilities based carriers and resellers. These data also contradict Prof. Harris' claim that AT&T does not play a significant role in providing this type of wholesale capacity. In sum, the 1997 Atlantic-ACM data contradict Prof. Harris' claim that the proposed transaction "reduces effective supply for resellers from three carriers to two."

#### **D. THE PROPOSED TRANSACTION WOULD NOT PUT GTE AT RISK OF COMPETITIVE HARM**

69. GTE's experts claim that firms other than WorldCom are unable to provide GTE the wholesale services it requires and that other suppliers, or combinations of suppliers, are inadequate to meet its needs.<sup>44</sup> GTE's economists claim that GTE is uniquely dependent on WorldCom in attempting to explain how the proposed transaction will adversely affect GTE, thus motivating GTE's intervention in these proceedings.

70. These claims, however, are not supported by the experience of other resellers.

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43. Atlantic-ACM 1997-98 Interexchange Services Market Sizing and Share Analysis, July 1997. The data cited by Prof. Harris relate to a 1996 Atlantic-ACM survey that was based on a more limited sample than the 1997 data.

44. See Harris LD affidavit, p. 41.

For example, Excel, perhaps the nation's largest reseller, relies on multiple wholesale vendors including WorldCom, MCI and IXC.<sup>45</sup> Unidial, a reseller of a variety of telecommunications services, obtains wholesale services from Sprint and IXC as well as WorldCom.<sup>46</sup> Some resellers, for example, use different wholesale suppliers to provide service in different states; others use different wholesale suppliers for different products (e.g., 1+ dialing; private line; etc.). There appears to be no technological impediment to using a multiple vendor strategy. We understand that, unlike GTE, the great majority of WorldCom's wholesale customers do not rely exclusively on WorldCom but instead employ a multiple vendor strategy.

71. GTE's claim that it is uniquely dependent on WorldCom, if correct, has the peculiar implication that, contrary to the claims by GTE's economists, GTE should be unaffected by the proposed transaction. Specifically, if WorldCom is uniquely positioned to supply wholesale services to GTE then WorldCom today is, from GTE's perspective, a monopoly supplier of wholesale services and already is extracting a monopoly premium from GTE, leaving GTE indifferent between using WorldCom and other wholesaler providers. Under these circumstances, the proposed transaction would not adversely affect GTE.

72. Nonetheless, GTE's economists claim that the proposed transaction will suppress the growth of GTE's resale business, and will impede its ability to "develop the brand awareness, sales networks and operational arrangements needed to build the transition to facilities-based service."<sup>47</sup> Presumably, GTE will migrate its interexchange business to its own facilities in part based on the capacity that it now owns (i.e., the capacity it purchased from Qwest). Moreover, GTE's economists fail to note that WorldCom and GTE have a multiyear contract which would appear to protect GTE from anticompetitive consequences of the

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45. Excel 10K filing with SEC, February 13, 1997.

46. <<http://www.unidial.com>>, March 17, 1998.

47. Harris LD affidavit, p. 41.

proposed transaction.

**VI. EQUITY MARKETS DO NOT PROVIDE EVIDENCE THAT THE PROPOSED TRANSACTION IS ANTICOMPETITIVE**

73. Prof. Harris is incorrect in attempting to attribute stock market returns over a period of several months to a single event: here, the alleged anticompetitive effects of this transaction. A large number of factors contribute to stock market performance over such an extended period of time. While Prof. Harris now acknowledges that other factors may have contributed to changes in stock prices, he continues to ignore standard practice in the finance literature of looking at much shorter time horizons (at most a few days) to isolate the effect of an event such as a merger. (Such studies are called "event" studies.)

74. We have analyzed the history of stock price changes for AT&T on a daily basis over recent months to illustrate the fallibility of Prof. Harris' analysis.<sup>48</sup> Using standard methods of analysis for event studies, our analysis shows that AT&T's stock price fell relative to the market as a whole on October 1-2, the two days following the announcement of the proposed WorldCom/MCI merger. This result is inconsistent with Prof. Harris' claim that rivals such as AT&T would benefit from a reduction in competition resulting from the proposed transaction.

75. Our review indicates that several factors appear to account for the increase in AT&T's stock price over the last few months. For example, AT&T's stock price increased (on a net-of-market basis) by roughly 13 percent in the days surrounding its announcement of a new Chief Executive Officer on October 20. Similarly, AT&T's stock price rose 8 percent following reports on November 18 that a cost-cutting plan would be implemented. In sum, a closer examination of the stock market performance of industry leader AT&T fails to support Prof. Harris' claim that the alleged anticompetitive effects of the proposed transaction caused AT&T's

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48. AT&T's market capitalization exceeds the sum of that for all other firms considered by Prof. Harris.

share price to rise over this period.

76. Prof. Harris claims that analysis of stock prices in the few days following a merger announcement "incorrectly assumes that the market has received full information regarding the transaction. This time window is far too short . . ." <sup>49</sup> It is telling that Prof. Harris makes no citation to the economic literature to support his position that it is appropriate to use a time horizon of several months to evaluate the competitive impact of a merger. Instead, the economic literature instead focusses on short time horizons in undertaking such analyses. <sup>50</sup> The reason is that so many factors affect a stock's price over a several month period that it is impossible to attribute changes to any one factor.

#### **VII. IT IS HIGHLY UNLIKELY THAT MCI WORLD COM COULD EXERCISE MARKET POWER IN THE PROVISION OF INTERNET SERVICES**

77. Prof. Harris claims that the proposed transaction would adversely affect the competition in the provision of Internet related services, in particular the provision of Internet backbone services. Prof. Harris claims that the transaction "will surely lead to higher prices, reduced output, lower product quality, and reduced service and innovation." <sup>51</sup> Prof. Harris' analysis, however, fails to adequately explain how MCI WorldCom could succeed in impeding competition in an industry characterized by an accepted interconnection standard and the absence of entry barriers.

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49. Harris LD Affidavit, p. 45.

50. See, for example, R. Stillman, "Examining Antitrust Policy Toward Horizontal Mergers," 11 Journal of Financial Economics 226 (1983) and E. Eckbo, "Horizontal Mergers, Collusion and Stockholder Wealth," 11 Journal of Financial Economics 241 (1983).

51. Harris Internet affidavit, p. 31.

**A. KEY ECONOMIC CHARACTERISTICS OF THE INTERNET**

78. Some key characteristics of the Internet are critical to evaluating the potential competitive impact of the proposed transaction on competition in the provision of Internet services.

- The Internet uses a standard, non-proprietary interconnection protocol. This technology enables diverse firms to connect to the Internet and to provide Internet services.
- Internet users demand, and Internet Service Providers (ISPs) make available, access to all sites on the Internet. In effect, this is the service that ISPs sell. For example, consumers demand the ability to send e-mail to any other Internet consumer and the ability to obtain information from any host site on the Internet. Firms that attempt to offer less than universal service would doubtless fail in the marketplace.
- There are no significant barriers to entering into the provision of Internet services. Entry in the provision of backbone services can be accomplished using available technology and equipment from third-party suppliers and through leased transmission capacity from a variety of network suppliers. The spectacular increase in Internet services in recent years and expected rapid future growth provides strong support for the proposition that there are no significant entry barriers in the industry.

79. These fundamental industry characteristics greatly complicate attempts by firms to exercise market power. The industry satisfies the primary structural characteristic of a competitive industry -- the absence of barriers to entry. The complex institutional arrangements in the industry and the fact that, as its name implies, the Internet is a "network" does not undo the basic economic principle that market power cannot be exercised in the absence of entry barriers.

**B. THE ABILITY OF OTHER SERVICE PROVIDERS TO RECONFIGURE THEIR NETWORKS WOULD DETER ATTEMPTS BY THE MERGED COMPANY TO RAISE INTERCONNECTION RATES**

80. Attempts by MCI WorldCom to exercise market power by raising prices charged to ISPs (or other backbone customers) are made considerably more complicated by the ability of other service providers to reconfigure their networks. If MCI WorldCom attempted to charge ISP customers a supracompetitive price, various ISPs could form a "subnetwork" and aggregate their traffic. This may enable them to take advantage of economies of scale in obtaining Internet backbone access from MCI WorldCom and realize savings relative to the costs faced by the two ISPs individually. The absence of barriers to establishing connections between ISPs enables ISPs to reduce their reliance on MCI WorldCom by exchanging certain types of traffic in this "subnetwork," activity which would have been performed by MCI WorldCom.

81. In addition, an ISP can switch backbone providers in response to an attempt by MCI WorldCom to increase interconnection rates. This can be done by leasing a private line to establish an interconnection to a competing backbone's POP. The ISP can then obtain access to MCI WorldCom through this new backbone interconnection. The ISP's ability to aggregate its traffic with its new backbone supplier and realize economies of scale in obtaining interconnection with MCI WorldCom reduces the benefit to MCI WorldCom of increasing rates in the first instance. Similarly, a backbone facing above-competitive interconnection rates from MCI WorldCom could terminate its interconnection agreement, but retain access to MCI WorldCom by establishing an interconnection with a backbone that had a connection. MCI WorldCom can be harmed by this response due in part to economies of scale in obtaining access.

82. The standard interconnection protocol and absence of other barriers to entry and expansion greatly facilitates such responses by enabling firms to rapidly adjust network configuration to changes in prices. The ability to implement such changes, combined with the savings that can be achieved by networking and aggregating traffic, enables firms to reduce their reliance on even a "dominant" Internet backbone provider. The existence of a standard, non-proprietary interconnection protocol which enables multiple suppliers to deploy facilities avoids the "positive feedback" phenomenon that leads to high concentration in some network industries.

**C. ATTEMPTS TO DISCRIMINATE AGAINST RIVAL BACKBONE PROVIDERS  
WOULD BE UNLIKELY TO SUCCEED**

83. Prof. Harris claims that, as a result of the merger, any new backbone service provider "will be dependent on MCI/WorldCom for interconnection and would be subject to service quality degradation or monopolistic charges imposed by MCI/WorldCom."<sup>52</sup> Prof. Harris, however, recognizes that "[t]here is no question that if MCI Worldcom degraded interconnection service to other backbones it would harm its own ISP and end user customers as well as the customers of other backbones."<sup>53</sup> This is the consequence of every Internet user's demand for ubiquitous access to each other and for high quality interconnections.

84. Despite this constraint, Prof. Harris claims that MCI WorldCom would find it profitable to engage in a strategy of discriminating against rival providers of Internet backbone services. He claims that potential harm to MCI Worldcom's customers "could be minimized ... by targeting backbones one at a time where the degraded service would have a small effect on

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52. Harris Internet affidavit, p. 23.

53. Harris Internet affidavit, p. 27.

MCI/WorldCom's service, but devastating effects on the service of the smaller backbone."<sup>54</sup>

85. Prof. Harris' "serial discrimination" hypothesis is implausible and would be unlikely to succeed.<sup>55</sup> Presumably, such a strategy would be motivated by MCI WorldCom's desire to induce the target backbone's customers to purchase access from MCI WorldCom. However, In response to MCI Worldcom's actions, the target backbone could simply cease its direct interconnection relationship with MCI WorldCom and establish an interconnection (or expand an already existing interconnection) with other backbone providers that did not yet face discrimination. The target network could still exchange traffic with MCI WorldCom through this alternative channel. Thus, attempts to discriminate can have the effect of driving a "target" backbone's customers to rivals, not to MCI WorldCom.

86. As discussed above, MCI WorldCom's strategy would result in network realignment, with networks that did not face discrimination selling interconnection (including interconnection to MCI WorldCom) to the "target" backbones. The realignment could enable networks other than MCI WorldCom to take advantage of economies of scale in purchasing access from MCI WorldCom and would facilitate network realignment that would reduce utilization of MCI WorldCom. Thus, MCI WorldCom's strategy would result in the loss of revenue from the target backbone that would not be fully recouped.

87. As this sequential process continued, and "non-target" networks grew, continued attempts to discriminate would become increasingly costly to MCI WorldCom, whose customers also demand ubiquitous, high quality service. This would make further attempts at "serial discrimination" increasingly risky. Moreover, this strategy would be defeated by the ability of

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54. Id, p. 27.

55. For present purposes, we maintain Prof. Harris' assumption that MCI WorldCom's would "market share" would be high, on the order of roughly 50 percent. For simplicity, we also disregard the possibility of peering relationships between backbones, accepting here Prof. Harris' characterization of these relationships as "payments-in-kind." (Harris Internet affidavit, p. 7.)

firms to enter and reconfigure their networks in order to reduce their dependence on MCI WorldCom, as described in Section B above.

**D. MCI WORLDCOM WOULD NOT BE A "DOMINANT" PROVIDER OF INTERNET SERVICES**

88. The discussion in Section C above maintains Prof. Harris' assumption that MCI WorldCom is a "dominant" firm. The analysis and data presented below indicate that this assumption is incorrect. Instead, MCI WorldCom appears to face a large number of rival providers of Internet backbone services. In addition, the growth in a variety of measures of Internet services and expectations of future growth strongly suggests that there are no significant barriers to entry into the provision of Internet services.

89. We do not revisit here attempts to evaluate MCI's and WorldCom's market shares. Problems with attempts to measure market shares through ISP connections, such as those cited by Prof. Harris, are addressed in our prior affidavit. More fundamentally, however, analysis based on market shares is likely to be of little value in attempting to evaluate the competition in an industry that is changing as rapidly as the provision of Internet services.

90. The complexity (and irrelevance) of a market share analysis is underscored by the ability of customers to change network configuration in response to changes in prices charged by Internet backbone providers. As discussed above, increases in interconnection prices are likely to induce substitution of services provided by ISPs for services provided by backbone providers, potentially linking these activities into a single market and complicating analysis of shares and concentration.

**1. MCI and WorldCom face many rivals in virtually all areas in which they both operate Internet backbone hubs**

91. Boardwatch magazine reports the location of backbone hubs operated by national Internet backbone providers.<sup>56</sup> These hubs reflect major points on the Internet backbone where customers obtain interconnection. We have used these data to identify cities in which both MCI and WorldCom now operate Internet backbone hubs.<sup>57</sup> For cities served by both firms, we have identified other Internet backbone providers that also operate hubs.

92. The results of this exercise are reported in Table 5. These results indicate that a large number of Internet backbone operators provide service in virtually all cities in which MCI and WorldCom both operate hubs. These data demonstrate that customers, including ISPs and end users that obtain access through connections in these cities, have access to a wide number of alternative backbone suppliers. For example, 27 national Internet backbone providers operate hubs in Chicago. The corresponding figures for New York and Los Angeles are 25 and 26 respectively. Only one city in which both WorldCom and MCI operate, Greensboro, North Carolina, is served by fewer than six other national Internet backbones. The availability of these alternatives provides direct competition to MCI WorldCom and otherwise enables customers to lessen their dependence on MCI WorldCom. Competition from providers in nearby cities would also be important in assessing market power.

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56. Boardwatch defines national Internet backbone service providers as firms that maintain a hub in at least five different states, spanning both coasts, and peering at the major NAPs. Backbones are also generally required to have DS-3 speeds or higher. (Boardwatch Magazine Directory of Internet Service Providers, Fall 1997, p. 27.)

57. WorldCom hubs are defined to include hubs operated by UUNET, ANS, CNS and GridNet.

**Table 5**  
**National Internet Backbone Providers with Backbone POPs in Cities where**  
**WorldCom and MCI have Backbone POPs**

**Fall 1997**

| Firm               | Chicago   | Los Angeles | New York  | Washington | Atlanta   | Dallas    | San Francisco | Boston    | Houston   | Denver    | Seattle   | Cleveland | Kansas City | Greensboro |
|--------------------|-----------|-------------|-----------|------------|-----------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-------------|------------|
| AGIS               | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         | x         | x         |             |            |
| AT&T/TELEPORT      | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         | x         |           |             |            |
| BECHTEL            | x         | x           | x         | x          |           | x         | x             |           |           |           | x         |           |             |            |
| CAIS               | x         |             | x         | x          |           |           | x             |           |           |           |           |           |             |            |
| CONCENTRIC         | x         | x           | x         | x          | x         | x         |               | x         |           | x         |           |           |             |            |
| CRL                | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         | x         | x         | x           |            |
| CWIX               | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         |           | x         | x           |            |
| DATAEXCHANGE       | x         | x           |           | x          | x         |           | x             |           |           |           |           |           |             |            |
| DIGEX              | x         | x           | x         | x          | x         | x         | x             | x         | x         |           |           | x         | x           |            |
| ELECTRIC LIGHTWAVE |           | x           | x         |            |           | x         | x             |           |           |           | x         |           |             |            |
| EPOCH              | x         | x           | x         |            | x         |           |               |           |           | x         |           |           |             |            |
| GEONET             | x         | x           | x         | x          |           |           | x             | x         |           |           |           |           |             |            |
| GETNET             |           |             |           | x          |           |           |               |           |           |           |           |           |             |            |
| GLOBALCENTER       | x         | x           |           |            | x         | x         |               |           |           |           | x         |           |             |            |
| GOODNET            | x         | x           | x         | x          | x         | x         |               |           | x         | x         |           |           |             |            |
| GTE/BBN            | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         |           | x         |             |            |
| IBM                | x         | x           | x         |            | x         | x         | x             |           |           |           |           |           |             |            |
| IDT                | x         | x           | x         | x          |           |           |               | x         | x         |           |           |           |             |            |
| INET               | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         | x         | x         | x           |            |
| MCI                | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         | x         | x         | x           | x          |
| NET ACCESS         | x         | x           | x         | x          | x         | x         | x             | x         | x         |           | x         | x         |             |            |
| NETCOM             | x         | x           |           | x          | x         | x         |               |           |           | x         | x         |           |             |            |
| PRIORI             | x         |             | x         | x          | x         | x         |               | x         | x         |           |           |           |             |            |
| PSINET             | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         | x         | x         | x           |            |
| SAVVIS             | x         | x           | x         |            | x         | x         |               |           |           |           |           |           |             |            |
| SPRINT             | x         |             |           | x          | x         |           | x             |           |           |           | x         |           | x           |            |
| VISINET            | x         | x           | x         | x          |           |           |               | x         |           |           |           |           |             |            |
| VNET               |           | x           | x         | x          | x         | x         | x             |           | x         |           |           |           |             |            |
| WORLDCom           | x         | x           | x         | x          | x         | x         | x             | x         | x         | x         | x         | x         | x           | x          |
| ZIPLINK            | x         | x           | x         | x          | x         |           | x             | x         | x         |           |           |           |             |            |
| <b>Total</b>       | <b>27</b> | <b>26</b>   | <b>25</b> | <b>25</b>  | <b>23</b> | <b>21</b> | <b>20</b>     | <b>17</b> | <b>16</b> | <b>13</b> | <b>13</b> | <b>10</b> | <b>8</b>    | <b>2</b>   |

Source: Boardwatch Internet Service Provider Directory, Fall 1997.

Note: WorldCom consists of UUnet, ANS, CNS, and GridNet.

**2. The number of new backbone providers and other measures of Internet activity have increased dramatically**

93. A review of the rapid increase in the number of new Internet backbone providers underscores the inability of MCI WorldCom to dominate the provision of Internet services. As shown in Table 6, the number of national Internet backbone providers reported in Boardwatch Magazine's Internet Service Providers Directories has grown from 10 in the Summer 1996 edition to 32 in the Fall 1997 edition. The most recent Keynote/Boardwatch Index of Backbone Providers report analyzes the performance of 39 U.S. and Canadian Internet backbones.<sup>58</sup>

94. Additional measures of the growth in the provision of Internet services are provided in Table 7. In addition to the growth in the number of network providers, there has also been extraordinary growth in the number of backbone POPs and the number of ISPs reported by Boardwatch, as well as enormous growth in revenue earned by ISPs.

95. These data provide strong evidence of the absence of barriers to entry into the provision of Internet backbone services. Under such conditions, it is highly unlikely that attempts to raise price above the competitive level could succeed.

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58. Press Release, Third Keynote/Boardwatch Index of Backbone Providers, March 19, 1998.

Table 6

**National Internet Backbone Providers  
Summer 1996 - Fall 1997**

| <b>Backbone Provider Name</b> | <b>Present in<br/>Summer 1996<br/>Data</b> | <b>Present in<br/>Fall 1996<br/>Data</b> | <b>Present in<br/>March/April<br/>1997 Data</b> | <b>Present in<br/>May/June<br/>1997 Data</b> | <b>POPs<br/>Fall 1997</b> |
|-------------------------------|--|--|---|--|---------------------------|
| WorldCom                      | X  | X  | X   | X  | 1347                      |
| IBM                           | X  | X  | X   | X  | 970                       |
| MCI                           | X  | X  | X   | X  | 475                       |
| PSINet                        | X  | X  | X   | X  | 350                       |
| DataXchange                   | X  | X  | X   | X  | 312                       |
| AGIS                          | X  | X  | X   | X  | 200                       |
| Sprint                        | X  | X  | X   | X  | 199                       |
| BBN                           | X  | X  | X   | X  | 66                        |
| CRL                           | X  | X  | X   | X  | 36                        |
| CWIX                          |  | X  | X   | X  | 285                       |
| Goodnet                       |  | X  | X   | X  | 125                       |
| Digex                         |  | X  | X   | X  | 60                        |
| iSTAR (Ottawa)                |  | X  | X   | X  | 43                        |
| Epoch                         |  |  | X   | X  | 823                       |
| Global Center                 |  |  | X   | X  | 80                        |
| Savvis                        |  |  | X   | X  | 20                        |
| Bechtel                       |  |  | X   | X  | 13                        |
| GetNet Int'l                  |  |  | X   | X  | 6                         |
| Netrail                       |  |  | X   | X  |                           |
| ATMnet                        |  |  | X   |  |                           |
| AT&T Teleport                 |  |  |   | X  | 822                       |
| IDT                           |  |  |   | X  | 90                        |
| Visinet                       |  |  |   | X  | 22                        |
| GeoNet                        |  |  |   | X  | 10                        |
| Electric Lightwave            |  |  |   |  | 548                       |
| Vnet                          |  |  |   |  | 360                       |
| NetCom                        |  |  |   |  | 336                       |
| ZipLink                       |  |  |   |  | 161                       |
| Concentric                    |  |  |   |  | 149                       |
| INet Solutions                |  |  |   |  | 80                        |
| Bell Advanced Comm. (CAN)     |  |  |   |  | 23                        |
| Net Access                    |  |  |   |  | 20                        |
| Priori Networks               |  |  |   |  | 11                        |
| CAIS                          |  |  |   |  | 9                         |

Note: WorldCom includes UUNET, ANS, CNS, and GridNet.

Source: Boardwatch Internet Service Providers Directories.

**Table 7**

**Measures of Internet Growth**

| <b>Date</b>            | <b>Number of<br/>Backbone Pro-<br/>viders<sup>1</sup></b> | <b>Number of<br/>Backbone<br/>POPs<sup>1</sup></b> | <b>Number of<br/>ISPs<sup>1</sup></b> | <b>Monthly ISP<br/>Revenue<sup>2</sup></b> |
|------------------------|---|--|---------------------------------------|--|
| May/June 1996          | 9   | 2,732  | 2,266                                 | \$154,166,667                              |
| September/October 1996 | 13  | 3,100  | 3,068                                 |  |
| March/April 1997       | 20  | 4,304  | 3,747                                 |  |
| June 1997              | 23  | 4,947  | 4,009                                 |  |
| September/October 1997 | 32  | 8,051  | 4,354                                 | \$700,000,000                              |
| CAGR                   | 144.84%   | 114.45%  | 58.57%                                | 190.96%                                    |

1. Boardwatch
2. Maloff Group

## **VIII. PROF. HARRIS' MISCHARACTERIZATION OF PRIOR TESTIMONY**

### **A. WORLDCOM AS A MAVERICK**

96. Prof. Harris misquotes and mischaracterizes our prior declaration in his long distance affidavit. Prof. Harris writes (p. 37):

WorldCom and MCI's experts Carlton and Sider are simply wrong when they assert that GTE has

"no sound economic basis for ... its characterization of WorldCom as a maverick."

97. In fact, our declaration says something quite different. At page 25 of our declaration, we stated:

GTE claims that the proposed transaction will eliminate WorldCom as a 'maverick' firm. Assuming that GTE is correct in its characterization of WorldCom as a maverick, there is no sound basis for their claim.

98. Needless to say, we agree that WorldCom is a significant competitor in the telecommunications industry. Instead, our view then, and now, is that the proposed transaction does not remove the "maverick" from the marketplace, if one chooses to characterize WorldCom in this manner. Instead, the transaction enables WorldCom to exercise control over a greater share of industry capacity. In addition, we find no basis to support GTE's claim that WorldCom is somehow unique in its ability to significantly affect competition by providing capacity to wholesale customers.

### **B. COMPETITIVENESS OF THE LONG DISTANCE INDUSTRY**

99. Prof. Harris also suggests that the views expressed in our declaration are inconsistent with those expressed by Carlton in an affidavit (with Prof. Kenneth Arrow) that supported waiver of the prohibition on RBOC provision of interLATA services. This suggestion is incorrect.

100. As a general matter, entry into an industry is desirable and rules preventing entry, all else equal, are undesirable. Entrants may be more efficient than incumbent suppliers and entry can deconcentrate markets resulting in lower prices (when a market is not perfectly competitive) or better products. However, the fact that entry into an industry may be desirable does not imply that mergers in the industry will be anticompetitive. All horizontal mergers have the effect of removing an independent competitor. However, mergers also create efficiencies that benefit consumers. Mergers in imperfectly competitive industries (in which entry may benefit consumers) are routinely approved. This is appropriate public policy because blocking efficiency enhancing mergers would harm consumer welfare.<sup>59</sup>

101. The relevant question for merger analysis is whether the change in concentration resulting from a transaction will be expected to raise price, not whether the market is perfectly competitive and whether entry could benefit consumers. The proper standards for merger evaluation must be forward looking, cognizant of entry into the marketplace, and cognizant of efficiencies generated by the merger.

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59. We also note that at the time the Carlton/Arrow affidavit was written, there was much less recognition of the likelihood of the massive entry now occurring.

We declare under penalty of perjury that the foregoing is true and correct.

*Dennis W. Carlton*

Dennis W. Carlton

*Hal S. Sider*

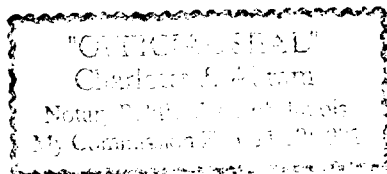
Hal S. Sider

Subscribed and sworn to before me,  
this 19th day of March, 1998.

*Charlotte J. Abram*

Notary Public

My Commission expires: 11/19/2001



## **Appendix 1**

**DENNIS WILLIAM CARLTON**

Economist

March 1998

Business Address: Lexecon Inc.  
332 South Michigan  
Chicago, Illinois 60604 (312) 322-0215

Home Address: 184 Sheridan Road  
Glencoe, Illinois 60022 (847) 835-8855

**EDUCATION**

Ph.D., MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts:  
Economics, 1975.

M.S., MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts:  
Operations Research, 1974.

A.B., HARVARD UNIVERSITY (Summa cum laude): Applied Math and Economics, 1972.

**EMPLOYMENT**

LEXECON INC., Chicago, Illinois: President.

UNIVERSITY OF CHICAGO, Graduate School of Business (1984 - present): Professor of  
Business Economics.

UNIVERSITY OF CHICAGO, Law School (1980 - 1984): Professor of Economics.

UNIVERSITY OF CHICAGO, Department of Economics: Assistant Professor (1976 - 1979):  
Associate Professor (1979 - 1980).

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts, Department of  
Economics (1975 - 1976): Instructor in Economics.

**OTHER PROFESSIONAL EXPERIENCE**

HARVARD UNIVERSITY, Public Policy Summer Course in Economics (1977): Professor.

BELL TELEPHONE LABORATORIES (Summers 1976, 1977).

JOINT CENTER FOR URBAN STUDIES OF M.I.T. AND HARVARD UNIVERSITY, Cambridge,  
Massachusetts (1974 - 1975).

CHARLES RIVER ASSOCIATES, Cambridge, Massachusetts (Summers 1971, 1972): Research  
Assistant.

### FIELDS OF SPECIALIZATION

Theoretical and Applied Microeconomics  
Industrial Organization  
Econometrics  
Urban Economics

### ACADEMIC HONORS AND FELLOWSHIPS

M.I.T., National Scholar Award, 1968  
Edwards Whitacker Award, 1969  
Detur Book Prize, 1969  
John Harvard Award, 1970  
Phi Beta Kappa, 1971  
National Science Foundation Fellowship, 1972 - 1975  
Recipient of Post-doctoral Grant from the Lincoln Foundation, 1975  
National Science Foundation Grant, 1977 - 1985  
Recipient of the 1977 P.W.S. Andrews Memorial Prize Essay, best essay in the field of Industrial Organization by a scholar under the age of thirty  
Ph.D. Thesis chosen to appear in the Garland Series of Outstanding Dissertations in Economics

### PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Co-editor, Journal of Law and Economics, 1980 - present  
Associate Editor, Regional Science and Urban Economics, 1987 - 1997  
Associate Editor, The International Journal of Industrial Organization, 1991 - 1995  
Member, American Economics Association, Econometrics Society  
National Bureau of Economic Research, Research Associate  
Member, Advisory Committee to the Bureau of the Census, 1987 - 1990  
Editorial Board, Intellectual Property Fraud Reporter, 1990 - 1995  
Consultant on Merger Guidelines to the U.S. Department of Justice, 1991 - 1992  
Accreditation Committee, Graduate School of Business, Stanford University, 1995  
Visiting Committee, Massachusetts Institute of Technology, Department of Economics, 1995 - present  
Resident Scholar, Board of Governors of the Federal Reserve System, Summer, 1995  
Member, Advisory Board, Economics Research Network, 1996 - present  
Member, Steering Committee, Social Science Research Council, Program in Applied Economics, 1997 - Present  
Participant in meetings with Committee of the Federal Reserve on Payment Systems, June 5, 1997  
Participant in round table discussions on "The Role of Classical Market Power in Joint Venture Analysis," before the Federal Trade Commission, November 19, 1997 and March 17, 1998.

### BOOKS

"Market Behavior Under Uncertainty," Ph.D. Thesis, Massachusetts Institute of Technology (September 1975); Garland Publishing (1984).

Modern Industrial Organization, Scott, Foresman & Co., co-authored with Jeffrey Perloff, second edition (1994), first edition (1990).